

STERLING WATER TECHNOLOGIES LLC

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identity: CP 289D

Recommended use of the chemical and restrictions on use: Use as water treatment chemical.

Manufacturer: Sterling Water Technologies LLC
902 S High St
Columbia, TN 38401

Telephone: (800) 426-2428

Emergency Phone: CHEMTREC: (800) 424-9300

SDS Date of Preparation: 5/19/16

2. HAZARDS IDENTIFICATION

GHS Classification:

Physical	Health	Environment
Not Hazardous	Eye Damage Category 1	Aquatic Acute Toxicity Category 1 Aquatic Chronic Toxicity Category 1

OSHA Specific Hazards: Combustible Dust Category 1

GHS Label Elements:

Danger!



Contains: Zinc Sulfate and Sodium Bisulfate

Statements of Hazard

May form combustible dust concentrations in air.

H318 Causes serious eye damage.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements

P273 Avoid release to the environment.

P280 Wear protective gloves, protective clothing and eye protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor.

P391 Collect spillage

P501 Dispose of contents and container in accordance with local and national regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Amount
Zinc Sulfate	7733-02-0	60-80%
Non-Hazardous Ingredients	Proprietary	10-30%
Sodium Bisulfate	7681-38-1	10-20%

The exact concentration is being withheld as a trade secret.

4. FIRST AID MEASURES

Eye: Immediately flush victim's eyes with large quantities of water for at least 20 minutes, holding the eyelids apart. Get immediate medical attention.

Skin: Wash skin thoroughly with soap and water. Get medical attention if irritation develops. Remove and launder clothing before re-use.

Ingestion: Do not induce vomiting unless directed to do so by a medical professional. Rinse mouth with water and give one glass of water to drink. Never give anything by mouth to an unconscious or convulsing person. Get medical attention if symptoms develop.

Inhalation: Remove victim to fresh air. If breathing is difficult or irritation persists, get medical attention.

Most important Symptoms: May cause moderate to severe eye irritation with possible eye damage. May cause skin irritation on prolonged contact. Inhalation of dust may cause mucous membrane and respiratory irritation. Chronic exposure may cause adverse effects on the blood, gastrointestinal and nervous system.

Indication of immediate medical attention/special treatment: Immediate medical attention is required for eye contact.

5. FIRE FIGHTING MEASURES

Suitable (and Unsuitable) Extinguishing Media: Use media appropriate for surrounding fire. Cool fire exposed containers and structures with water. Do not use solid water jet as that may create a dust cloud that can present an explosion hazard.

Specific hazards arising from the chemical: Dust generated in handling this material may present a potential fire and explosion hazard if suspended in air at high concentrations. Settled dust presents a fire hazard. Resuspension of the dust into the air by vibration, traffic, material handling, etc. in high concentrations in the presence of an ignition source could result in a dust explosion. Minimize the generation and accumulation of dust. Thermal decomposition may yield oxides of sulfur, zinc, sodium and phosphorus.

Special Protective Equipment and Precautions for Fire-Fighters: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing. Powders that become wet may cause surfaces to be extremely slippery and cause a slip hazard.

Explosion Data (sensitivity to mechanical impact or static discharge): None known.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures: Evacuate spill area and keep unprotected personnel away. Avoid creation of airborne dusts. Eliminate all sources of ignition. Wear appropriate protective clothing as described in Section 8. Powders that become wet may cause surfaces to be extremely slippery and present a slip hazard.

Methods and Materials for Containment and Cleaning Up: Scoop or shovel up using methods that minimize the generation of airborne dust. Non-sparking tools should be used. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in

sufficient concentrations. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Place dry material into an appropriate container for disposal. Flush spill area with water to remove residue. Prevent spill from entering sewers and water courses. Report releases as required by local, state and federal authorities.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Avoid contact with the eyes. Avoid prolonged or repeated skin contact. Avoid breathing dusts. Wear protective clothing and equipment as described in Section 8. Use with adequate ventilation. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Possible combustible dust hazard. Minimize the generation and accumulation of dust. Keep dust away from open flames, hot surfaces and sources of ignition. Follow good housekeeping practices to keep surfaces, including areas overhead such as piping, drop ceilings, ductwork, etc. free from settled dust. Dry powders can build static electricity charges when subjected to friction of transfer and in mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.

Do not reuse containers. Empty containers retain product residues and contaminants that can be hazardous. Follow all SDS precautions when handling empty containers.

Conditions for Safe Storage, Including Any Incompatibilities: Store in a cool, dry, well-ventilated area away from sources of ignitions and incompatible materials. Protect from physical damage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines:

Zinc Sulfate	5 mg/m ³ (Respirable fraction), 15 mg/m ³ (Total dust) TWA OSHA PEL (As PNOC)
Non-Hazardous Ingredients	5 mg/m ³ (Respirable fraction), 15 mg/m ³ (Total dust) TWA OSHA PEL (As PNOC)
Sodium Bisulfate	5 mg/m ³ (Respirable fraction), 15 mg/m ³ (Total dust) TWA OSHA PEL (As PNOC)

Engineering Controls: Use with general or adequate local exhaust ventilation to minimize exposure levels. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust handling systems (such as exhaust ducts, dust collectors, vessels and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e. there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks.

Respiratory Protection: If the occupational exposure limits are exceeded, a NIOSH approved respirator with particulate filters appropriate for the form and concentration of the contaminants should be used. Selection and use of respiratory equipment must be in accordance with OSHA 1910.134 and good industrial hygiene practice.

Skin Protection: Wear impervious gloves to prevent prolonged contact.

Eye Protection: Chemical safety goggles are recommended to prevent eye contact.

Other: Long-sleeved clothing and long pants recommended to avoid prolonged skin contact. Suitable washing facilities should be available in the work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance And Odor: White, granular powder with a characteristic odor.

Physical State: Solid	Odor Threshold: Not established
Vapor Density: Not applicable	Initial Boiling Point/Range: Not applicable
Solubility In Water: Soluble	Vapor Pressure: Not applicable
Relative Density: Not available	Evaporation Rate: Not applicable
Melting/Freezing Point: Not available	pH: Acidic in solution
VOC Content: 0%	Octanol/Water Coefficient: Not determined
Solubility: Soluble	Decomposition Temperature: Not determined
Viscosity: Not applicable	Flammability(solid, gas): Not determined
Flashpoint: Not determined	Autoignition Temperature: Not determined
Flammable Limits: LEL: Not applicable	UEL: Not applicable

10. STABILITY AND REACTIVITY

Reactivity: Not normally reactive

Chemical Stability: Stable under normal storage and handling conditions.

Possibility of Hazardous Reactions: None known.

Conditions to Avoid: Avoid heat, sparks, flames and all other sources of ignition. Avoid hygroscopic conditions and dust formation.

Incompatible Materials: Acids.

Hazardous Decomposition Products: When heated to decomposition emits toxic oxides of sulfur, zinc, sodium and phosphorus.

11. TOXICOLOGICAL INFORMATION

HEALTH HAZARDS:

Ingestion: Ingestion may cause gastrointestinal irritation. May cause nausea, vomiting and diarrhea. Large amounts may cause increased pulse rate, decreased blood pressure, acute pulmonary edema, kidney damage and hemorrhagic pancreatitis.

Inhalation: Inhalation of dust may cause irritation of the nose throat and upper respiratory tract.

Eye: May cause moderate to severe irritation with pain and tearing. Corneal damage is possible.

Skin: May cause irritation on prolonged or repeated contact.

Sensitization: This material is not known to cause sensitization.

Chronic: Chronic exposure to zinc sulfate may cause fatigue, intestinal inflammation, blood effects and central nervous system effects.

Carcinogenicity: None of the components is listed as a carcinogen or suspected carcinogen by IARC, NTP or OSHA.

Germ Cell Mutagenicity: This product is not classified as a mutagen.

Reproductive Toxicity: This product is not classified as toxic to reproduction.

Numerical Measures of Toxicity:

Product ATE: Oral LD50: 2137 mg/kg

Zinc Sulfate: Oral rat LD50: 1710 mg/kg, dermal rat LD50 > 2000 mg/kg

Sodium Bisulfate: Oral rat LD50 > 2000 mg/kg, inhalation rat LC50 > 2.4 mg/L/4 hr (no deaths)

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Zinc Sulfate: Pimephales promelas LC50: 0.33 mg/L/96 hr, Oncorhynchus mykiss NOEC: 0.13 mg/L/22 months

Sodium Bisulfate: Pimephales promelas LC50: 7960 mg/L/96 hr

This product is classified as very toxic to the aquatic environment with long-term adverse effects. Releases to the environment should be avoided.

Persistence and Degradability: No data available

Bioaccumulative Potential: No data available

Mobility in Soil: No data available

Other Adverse Effects: None known.

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with local, state and federal environmental regulations.

14. TRANSPORT INFORMATION

DOT Hazardous Materials Description:

Proper Shipping Name: Not Regulated

UN Number: None

Hazard Class/Packing Group: None

Labels Required: None

Note: Containers with greater than 1,250 lbs must be shipped as: UN3077, Environmentally Hazardous Substance, Solid, n.o.s. (Zinc sulfate mixture), 9, PG III RQ

15. REGULATORY INFORMATION

CERCLA: This product has an RQ of 1,250 lbs (based on the RQ of Zinc Sulfate of 1,000 lbs present at 60-80%). Some states have more stringent reporting requirements. Report all spills in accordance with local, state, and federal regulations.

SARA Hazard Category (311/312): Acute Health, Fire Hazard

SARA 313: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372):

Zinc Sulfate (zinc compound)	7733-02-0	60-80%
------------------------------	-----------	--------

EPA TSCA Inventory: All of the ingredients in this product are listed on the EPA TSCA Inventory.

Canadian CEPA: All the components of this product are listed on the Canadian DSL.

16. OTHER INFORMATION

NFPA Rating: Health = 3

Flammability = 2

Instability = 0

HMIS Rating: Health = 3

Flammability = 2

Physical Hazard = 0

Date of previous revision: 8/23/07

Date of current revision: 5/19/16

Revision summary: Updated format and all sections to comply with OSHA GHS regulations.

Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and handling of Combustible Particulate Solids, for safe handling.

NOTICE

This above information is believed to be correct but does not propose to be all inclusive and shall be used only as a guide. Sterling Water Technologies LLC shall not be held liable for any damage resulting from handling or from contact with the above product. This information relates only to the product designated herein and does not relate to its use in combination with any other material or process.